FRAME OUTPUT PENTODE

Pentode intended for use as frame output amplifier in colour television receivers.

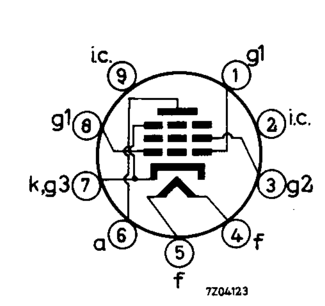
QUICK REFERENCE DATA				
Cathode current, average	I_k	max.	100	mA
Anode dissipation	W_a	max.	12	W

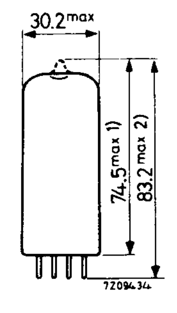
HEATING: Indirect by A.C. or D.C.; series supply

Heater current	I_f	300	mA
Heater voltage	V_f	17	V

DIMENSIONS AND CONNECTIONS Dimensions in mm

Base: Magnoval





CAPACITANCES

Anode to grid No. 1	C_{ag1}	max.	1.6	pF
Grid No. 1 to heater	C_{g1f}	max.	0.2	pF

---

1) Max. 71.4
2) Max. 80.1 for execution with pumping stem on base side.

TYPICAL CHARACTERISTICS

(Measured under pulse conditions)

Anode voltage	V_a		50	V_a	190	V
Grid No.2 voltage	V_{g2}		190	V_{g2}	190	V
Grid No.1 voltage	V_{g1}		-1	V_{g1}	-17	V
Anode current	I_{a_p}		320	I_a	60	mA
Grid No.2 current	I_{g2}	approx.	60	I_{g2}	5	mA
Transconductance				S	9	mA/V
Amplification factor				μ_{g2g1}	8	-

Remarks.

The minimum I_a to be expected as a result of spread of the tube characteristics tube deterioration during life and decrease of the mains voltage to 10 % below the nominal value can be derived from the curves on page B by decreasing by 40 % the I_a values situated on the curve A-B at V_{g2} occuring at the decreased mains voltage.

In order not to exceed the maximum permissible value of W_{g2}, the circuit should be designed in such a way that the anode voltage should never be lower than the value determined by curve A-B at the relevant V_{g2} value.

OPERATING CHARACTERISTICS (end of scan values)

Anode voltage	V_a	70	V
Grid No.2 voltage	V_{g2}	200	V
Grid No.1 voltage	V_{g1}	-5	V
Anode peak current	I_{a_p}	230	mA

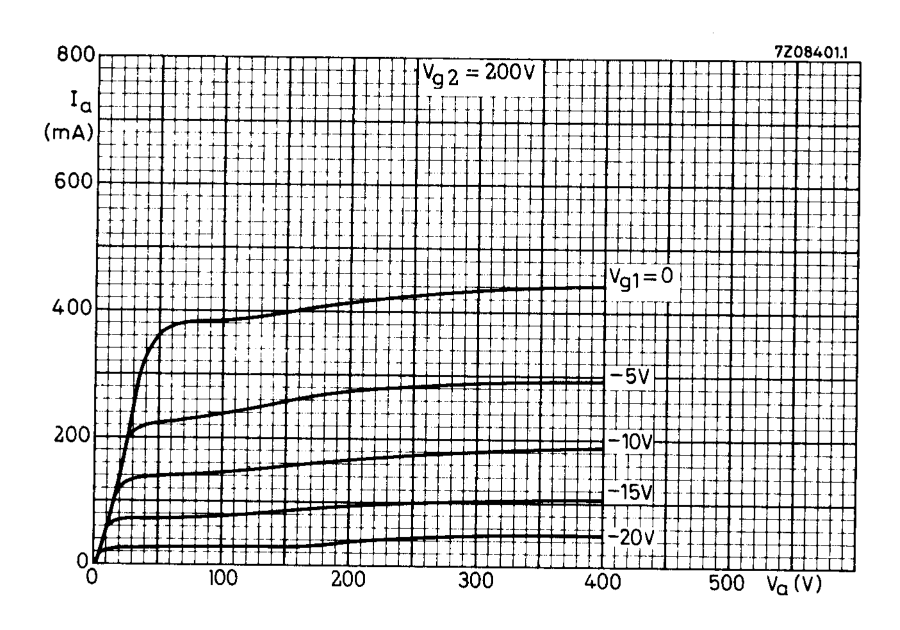
LIMITING VALUES (design centre rating system) unless otherwise stated

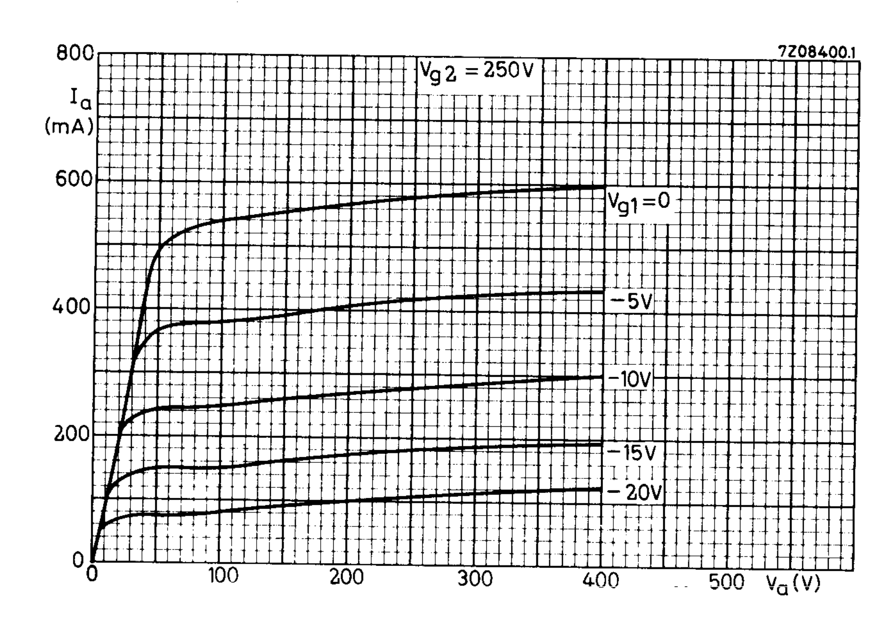
Anode voltage	V_{a_o}	max.	700	V	
	V_a	max.	400	V	
Anode peak voltage	V_{ap}	max.	2.5	kV	1)
Grid No.2 voltage	V_{g2o}	max.	700	V	
	V_{g2}	max.	275	V	
Anode dissipation	W_a	max.	12	W	
Grid No.2 dissipation	W_{g2}	max.	3	W	
design max.	W_{g2}	max.	4	W	
Cathode current	I_k	max.	100	mA	
Grid No.1 resistor, fixed bias	R_{g_1}	max.	1	MΩ	
automatic bias	R_{g_1}	max.	2.2	MΩ	
Cathode to heater voltage	V_{kf}	max.	220	V	

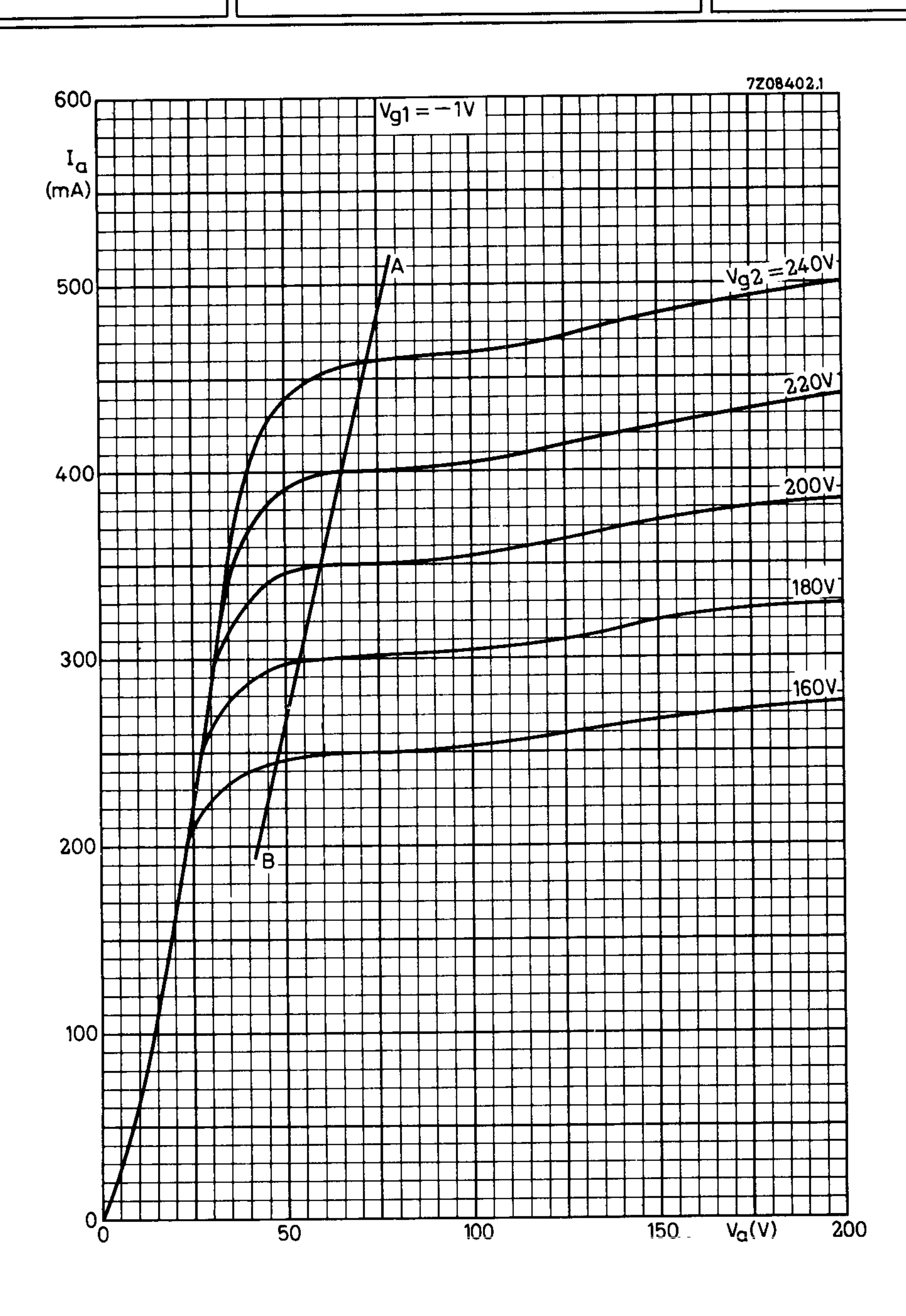
MICROPHONY

The maximum peak accelaration to which the tube may be subjected under the most unfavourable conditions is 1.5 g at frequencies $<$ 600 Hz. and 0.2 g at frequencies $\geq$ 600 Hz. The equivalent interferance voltage at grid No.1 will than be $<$ 25 mV.

1) Max. pulse duration 5% of a cycle and max. 1 ms.


7Z08401.1
$V_{g2} = 200V$
I_a (mA)
800
600
400
200
0
$V_{g1}=0$
−5V
−10V
−15V
−20V
0
100
200
300
400
500
V_a (V)


7Z08400.1
$V_{g2} = 250V$
I_a (mA)
800
600
400
200
0
$V_{g1}=0$
−5V
−10V
−15V
−20V
0
100
200
300
400
500
V_a (V)


7Z08402.1
600
500
400
300
200
100
0
I_a
(mA)
$V_{g1} = -1V$
A
B
$V_{g2} = 240V$
220V
200V
180V
160V
0
50
100
150
200
$V_a(V)$



PL508

page	sheet	date
1	1	1969.01
2	2	1969.01
3	3	1969.01
4	4	1969.01
5	5	1969.01
6	FP	1999.06.06